Sequence Listing

<110> Genentech Inc.
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Wood, William I.

<120> COMPOUNDS, COMPOSITIONS AND METHODS FOR THE TREATMENT OF DISEASES CHARACTERIZED BY A-33 RELATED ANTIGENS

<130> P1216R1

<140> PCT/US98/24855
<141> 1998-11-20

<150> US 60/066,364
<151> 1997-11-21

<150> US 60/078,936
<151> 1998-03-20

<150> PCT/US98/19437
<151> 1998-09-17

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Ile Leu Ala Ile Leu Leu Cys Ser Leu Ala Leu Gly Ser Val Thr
             20                  25                  30

Val His Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro
             35                  40                  45

Val Lys Leu Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val
             50                  55                  60

Glu Trp Lys Phe Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr
             65                  70                  75

Asn Asn Lys Ile Thr Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu
             80                  85                  90

Pro Thr Gly Ile Thr Phe Lys Ser Val Thr Arg Glu Asp Thr Gly
             95                 100                 105

Thr Tyr Thr Cys Met Val Ser Glu Glu Gly Gly Asn Ser Tyr Gly
            110                 115                 120

Glu Val Lys Val Lys Leu Ile Val Leu Val Pro Pro Ser Lys Pro
            125                 130                 135
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Thr Val Asn Ile Pro Ser Ser Ala Thr Ile Gly Asn Arg Ala Val
                140                 145                 150

Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro Pro Ser Glu Tyr Thr
                155                 160                 165

Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn Pro Lys Ser Thr
                170                 175                 180

Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro Thr Thr Gly
                185                 190                 195

Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly Glu Tyr
                200                 205                 210

Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser Asn
                215                 220                 225

Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val
                230                 235                 240

Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe
                245                 250                 255

Gly Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys
                260                 265                 270

Lys Gly Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala
                275                 280                 285

Arg Ser Glu Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val
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<210> 2
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<213> Homo sapiens

<400> 2

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                20                  25                  30

Gly Pro Trp Lys Gly Asp Val Asn Leu Pro Cys Thr Tyr Asp Pro
                35                  40                  45

Leu Gln Gly Tyr Thr Gln Val Leu Val Lys Trp Leu Val Gln Arg
                50                  55                  60

Gly Ser Asp Pro Val Thr Ile Phe Leu Arg Asp Ser Ser Gly Asp
                65                  70                  75

His Ile Gln Gln Ala Lys Tyr Gln Gly Arg Leu His Val Ser His
                80                  85                  90

Lys Val Pro Gly Asp Val Ser Leu Gln Leu Ser Thr Leu Glu Met
                95                 100                 105

Asp Asp Arg Ser His Tyr Thr Cys Glu Val Thr Trp Gln Thr Pro
                110                 115                 120
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Asp Gly Asn Gln Val Val Arg Asp Lys Ile Thr Glu Leu Arg Val
125 130 135

Gln Lys Leu Ser Val Ser Lys Pro Thr Val Thr Thr Gly Ser Gly
140 145 150

Tyr Gly Phe Thr Val Pro Gln Gly Met Arg Ile Ser Leu Gln Cys
155 160 165

Gln Ala Arg Gly Ser Pro Pro Ile Ser Tyr Ile Trp Tyr Lys Gln
170 175 180

Gln Thr Asn Asn Gln Glu Pro Ile Lys Val Ala Thr Leu Ser Thr
185 190 195

Leu Leu Phe Lys Pro Ala Val Ile Ala Asp Ser Gly Ser Tyr Phe
200 205 210

Cys Thr Ala Lys Gly Gln Val Gly Ser Glu Gln His Ser Asp Ile
215 220 225

Val Lys Phe Val Val Lys Asp Ser Ser Lys Leu Leu Lys Thr Lys
230 235 240

Thr Glu Ala Pro Thr Thr Met Thr Tyr Pro Leu Lys Ala Thr Ser
245 250 255

Thr Val Lys Gln Ser Trp Asp Trp Thr Thr Asp Met Asp Gly Tyr
260 265 270

Leu Gly Glu Thr Ser Ala Gly Pro Gly Lys Ser Leu Pro Val Phe
275 280 285

Ala Ile Ile Leu Ile Ile Ser Leu Cys Cys Met Val Val Phe Thr
290 295 300

Met Ala Tyr Ile Met Leu Cys Arg Lys Thr Ser Gln Gln Glu His
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Val Tyr Glu Ala Ala Arg
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<213> Artificial Sequence

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catcccctcc tctgccacca ttgggaaccg ggcagtgctg acatgctcag 200

aacaagatgg ttccccacct tctgaataca cctggttcaa agatgggata 250

gtgatgccta cgaatcccaa aagcacccgt gccttcagca actcttccta 300

tgtcctgaat cccacaacag gagagctggt ctttgatccc ctgtcagcct 350

ctgatactgg agaatacagc tgtgaggcac ggaatgggta 390

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<212> DNA
<213> Artificial Sequence

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gcgcaagctc gagaggaaac tgttgtgcct cttcatattg gcgatcctgt 150

tgtgctccct ggcattgggc agtgttacag ttgcactctt ctgaacctga 200

agtcagaatt cctgagaata atcctgtgaa gttgtcctgt gcctactcgg 250

gcttttcttc tccccgtgtg gagtggaagt ttgaccaagg agacaccacc 300

agactcgttt gctataataa caagatcaca gcttcctatg aggaccgggt 350

gaccttcttg ccaactggta tcaccttcaa gtccgtgaca cgggaagaca 400

ctgggacata cacttgtatg gtctctgagg aaggcggcaa cagctatggg 450

gaggtcaagg tcaagctcat cgtgcttgtg cctccatcca agcctacagt 500

taacatcccc tcctctgcca ccattgggaa ccgggcagtg ctgacatgct 550

cagaacaaga tggttcccca ccttctgaat acacctggtt caaagatggg 600

atagtgatgc ctacgaatcc caaaagcacc cgtgccttca gcaactcttc 650

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<212> DNA
<213> Artificial Sequence

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<223> sequence is synthesized

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acgtgtgaag tcacctggca gactcctgat ggcaaccaag tcgtgagaga 150

taagattact gagctccgtg tccagaaact ctctgtctcc aagcccacag 200

tgacaactgg cagcggttat ggcttcacgg tgccccaggg aatgaggatt 250

agccttcaat gccagggttc ggggttctcc tcccatcagt tatatttggt 300

ataagcaaca gactaataac cagggaaccc atcaaagtag caaccctaag 350

taccttactc ttcaagcctg cggtgatagc cgactcaggc tcctatttct 400

gcactgccaa gggccaggtt ggctctgagc agcacagcga cattgtgaag 450

tttgtggtca aagactcctc aaagctactc aagaccaaga ctgaggcacc 500

tacaaccatg acataccct tgaaagcaac atctacagtg aagcagtcct 550

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ccaggaaaga gcctgcctgt ctttgccatc atcctcatca tctccttgtg 650

ctgtatggtg gtttttacca tggcctatat catgctctgt cggaagacat 700

cccaacaaga gcatgtctac gaagcagcca gggcacatgc cagagaggcc 750

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<210> 6
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<212> PRT
<213> Homo sapiens

<400> 6

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Arg Val Thr Val Asp Ala Ile Ser Val Glu Thr Pro Gln Asp Val
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Leu Arg Ala Ser Gln Gly Lys Ser Val Thr Leu Pro Cys Thr Tyr
                35                  40                  45

His Thr Ser Thr Ser Ser Arg Glu Gly Leu Ile Gln Trp Asp Lys
            50                  55                  60

Leu Leu Leu Thr His Thr Glu Arg Val Val Ile Trp Pro Phe Ser
        65                  70                  75

Asn Lys Asn Tyr Ile His Gly Glu Leu Tyr Lys Asn Arg Val Ser
    80                  85                  90

Ile Ser Asn Asn Ala Glu Gln Ser Asp Ala Ser Ile Thr Ile Asp
95                  100                 105

Gln Leu Thr Met Ala Asp Asn Gly Thr Tyr Glu Cys Ser Val Ser
            110                 115                 120

Leu Met Ser Asp Leu Glu Gly Asn Thr Lys Ser Arg Val Arg Leu
        125                 130                 135

Leu Val Leu Val Pro Pro Ser Lys Pro Glu Cys Gly Ile Glu Gly
    140                 145                 150

Glu Thr Ile Ile Gly Asn Asn Ile Gln Leu Thr Cys Gln Ser Lys
155                 160                 165

Glu Gly Ser Pro Thr Pro Gln Tyr Ser Trp Lys Arg Tyr Asn Ile
            170                 175                 180

Leu Asn Gln Glu Gln Pro Leu Ala Gln Pro Ala Ser Gly Gln Pro
        185                 190                 195

Val Ser Leu Lys Asn Ile Ser Thr Asp Thr Ser Gly Tyr Tyr Ile
    200                 205                 210

Cys Thr Ser Ser Asn Glu Glu Gly Thr Gln Phe Cys Asn Ile Thr
215                 220                 225

Val Ala Val Arg Ser Pro Ser Met Asn Val Ala Leu Tyr Val Gly
            230                 235                 240

Ile Ala Val Gly Val Val Ala Ala Leu Ile Ile Ile Gly Ile Ile
        245                 250                 255

Ile Tyr Cys Cys Cys Cys Arg Gly Lys Asp Asp Asn Thr Glu Asp
    260                 265                 270

Lys Glu Asp Ala Arg Pro Asn Arg Glu Ala Tyr Glu Glu Pro Pro
275                 280                 285

Glu Gln Leu Arg Glu Leu Ser Arg Glu Arg Glu Glu Glu Asp Asp
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Tyr Arg Gln Glu Glu Gln Arg Ser Thr Gly Arg Glu Ser Pro Asp
        305                 310                 315

His Leu Asp Gln
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<211> 2181
<212> DNA

<213> Homo sapiens

<400> 7

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gcacctaaca gtggacactt atggccgtcc catcctggaa gtgccagaga 200

gtgtaacagg accttggaaa ggggatgtga atcttccctg cacctatgac 250

cccctgcaag gctacaccca agtcttggtg aagtggctgg tacaacgtgg 300

ctcagaccct gtcaccatct ttctacgtga ctcttctgga gaccatatcc 350

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ggactggacc actgacatgg atggctacct tggagagacc agtgctgggc 950

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<211> 1295
<212> DNA
<213> Homo sapiens

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tcacagcagt agagtaccaa gaggctattt tagcctgcaa aaccccaaag 250

aagactgttt cctccagatt agagtggaag aaactgggtc ggagtgtctc 300

ctttgtctac tatcaacaga ctcttcaagg tgattttaaa aatcgagctg 350

agatgataga tttcaatatc cggatcaaaa atgtgacaag aagtgatgcg 400

gggaaatatc gttgtgaagt tagtgcccca tctgagcaag gccaaaacct 450

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ggcggatcac gaggtcagga gttctagacc agtctggcca atatggtgaa 1050

accccatctc tactaaaata caaaaattag ctgggcatgg tggcatgtgc 1100

ctgcagttcc agctgcttgg gagacaggag aatcacttga acccgggagg 1150

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<210> 9
<211> 312
<212> PRT
<213> Homo sapiens

<400> 9

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             20                  25                  30

Ala Pro Lys Asp Gln Gln Val Val Thr Ala Val Glu Tyr Gln Glu
             35                  40                  45

Ala Ile Leu Ala Cys Lys Thr Pro Lys Lys Thr Val Ser Ser Arg
             50                  55                  60

Leu Glu Trp Lys Lys Leu Gly Arg Ser Val Ser Phe Val Tyr Tyr
             65                  70                  75

Gln Gln Thr Leu Gln Gly Asp Phe Lys Asn Arg Ala Glu Met Ile
             80                  85                  90

Asp Phe Asn Ile Arg Ile Lys Asn Val Thr Arg Ser Asp Ala Gly
             95                 100                 105

Lys Tyr Arg Cys Glu Val Ser Ala Pro Ser Glu Gln Gly Gln Asn
            110                 115                 120

Leu Glu Glu Asp Thr Val Thr Leu Glu Val Leu Val Ala Pro Ala
            125                 130                 135

Val Pro Ser Cys Glu Val Pro Ser Ser Ala Leu Ser Gly Thr Val
            140                 145                 150

Val Glu Leu Arg Cys Gln Asp Lys Glu Gly Asn Pro Ala Pro Glu
            155                 160                 165

Tyr Thr Trp Phe Lys Asp Gly Ile Arg Leu Leu Glu Asn Pro Arg
```

170 175 180

Leu Gly Ser Gln Ser Thr Asn Ser Ser Tyr Thr Met Asn Thr Lys
185 190 195

Thr Gly Thr Leu Gln Phe Asn Thr Val Ser Lys Leu Asp Thr Gly
200 205 210

Glu Tyr Ser Cys Glu Ala Arg Asn Ser Val Gly Tyr Arg Arg Cys
215 220 225

Pro Gly Lys Arg Met Gln Val Asp Asp Leu Asn Ile Ser Gly Ile
230 235 240

Ile Ala Ala Val Val Val Val Ala Leu Val Ile Ser Val Cys Gly
245 250 255

Leu Gly Val Cys Tyr Ala Gln Arg Lys Gly Tyr Phe Ser Lys Glu
260 265 270

Thr Ser Phe Gln Lys Ser Asn Ser Ser Ser Lys Ala Thr Thr Met
275 280 285

Ser Glu Asn Val Gln Trp Leu Thr Pro Val Ile Pro Ala Leu Trp
290 295 300

Lys Ala Ala Ala Gly Gly Ser Arg Gly Gln Glu Phe
305 310

<210> 10
<211> 300
<212> PRT
<213> Mus musculus

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Tyr Thr Ala Gln Ser Asp Val Gln Val Pro Glu Asn Glu Ser Ile
35 40 45

Lys Leu Thr Cys Thr Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu
50 55 60

Trp Lys Phe Val Gln Gly Ser Thr Thr Ala Leu Val Cys Tyr Asn
65 70 75

Ser Gln Ile Thr Ala Pro Tyr Ala Asp Arg Val Thr Phe Ser Ser
80 85 90

Ser Gly Ile Thr Phe Ser Ser Val Thr Arg Lys Asp Asn Gly Glu
95 100 105

Tyr Thr Cys Met Val Ser Glu Glu Gly Gly Gln Asn Tyr Gly Glu
110 115 120

Val Ser Ile His Leu Thr Val Leu Val Pro Pro Ser Lys Pro Thr
125 130 135

Ile Ser Val Pro Ser Ser Val Thr Ile Gly Asn Arg Ala Val Leu

140 145 150

Thr Cys Ser Glu His Asp Gly Ser Pro Pro Ser Glu Tyr Ser Trp
155 160 165

Phe Lys Asp Gly Ile Ser Met Leu Thr Ala Asp Ala Lys Lys Thr
170 175 180

Arg Ala Phe Met Asn Ser Ser Phe Thr Ile Asp Pro Lys Ser Gly
185 190 195

Asp Leu Ile Phe Asp Pro Val Thr Ala Phe Asp Ser Gly Glu Tyr
200 205 210

Tyr Cys Gln Ala Gln Asn Gly Tyr Gly Thr Ala Met Arg Ser Glu
215 220 225

Ala Ala His Met Asp Ala Val Glu Leu Asn Val Gly Gly Ile Val
230 235 240

Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Leu Leu Ile Phe
245 250 255

Gly Val Trp Phe Ala Tyr Ser Arg Gly Tyr Phe Glu Thr Thr Lys
260 265 270

Lys Gly Thr Ala Pro Gly Lys Lys Val Ile Tyr Ser Gln Pro Ser
275 280 285

Thr Arg Ser Glu Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val
290 295 300

<210> 11
<211> 1842
<212> DNA
<213> Homo sapiens

<400> 11
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accgctgctc taaagaaaag aaaactggag gctgggcgca gtggctcacg cctgtaatcc 1680
cagaggctga ggcaggcgga tcacctgagg tcgggagttc gggatcagcc tgaccaacat 1740
ggagaaaccc tactggaaat acaaagttag ccaggcatgg tggtgcatgc ctgtagtccc 1800
agctgctcag gagcctggca acaagagcaa aactccagct ca 1842

<210> 12
<211> 24
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<213> artificial sequence

<220>
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<400> 12
tcgcggagct gtgttctgtt tccc 24

<210> 13
<211> 50
<212> DNA
<213> artificial sequence

<220>
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<400> 13
tgatcgcgat ggggacaaag gcgcaagctc gagaggaaac tgttgtgcct 50

<210> 14
<211> 20
<212> DNA
<213> artificial sequence

<220>
<223> sequence is synthesized

<400> 14
acacctggtt caaagatggg 20

<210> 15
<211> 24
<212> DNA
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<220>
<223> sequence is synthesized

<400> 15
taggaagagt tgctgaaggc acgg 24

<210> 16
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<220>
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<400> 16
ttgccttact caggtgctac 20

<210> 17

<211> 20
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<220>
<223> sequence is synthesized

<400> 17
actcagcagt ggtaggaaag 20

<210> 18
<211> 24
<212> DNA
<213> artificial sequence

<220>
<223> sequence is synthesized

<400> 18
tatccctcca attgagcacc ctgg 24

<210> 19
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<212> DNA
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<220>
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<400> 19
gtcggaagac atcccaacaa g 21

<210> 20
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<212> DNA
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<220>
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<400> 20
cttcacaatg tcgctgtgct gctc 24

<210> 21
<211> 24
<212> DNA
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<220>
<223> sequence is synthesized

<400> 21
agccaaatcc agcagctggc ttac 24

<210> 22
<211> 50
<212> DNA
<213> artificial sequence

<220>
<223> sequence is synthesized

<400> 22

tggatgaccg gagccactac acgtgtgaag tcacctggca gactcctgat 50

<210> 23
<211> 260
<212> PRT
<213> Homo sapiens

<400> 23

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Leu Ala Leu Gly Ser Val Thr Val His Ser Ser Glu Pro Glu Val
  1               5                  10                  15

Arg Ile Pro Glu Asn Asn Pro Val Lys Leu Ser Cys Ala Tyr Ser
             20                  25                  30

Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe Asp Gln Gly Asp
             35                  40                  45

Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr Ala Ser Tyr
             50                  55                  60

Glu Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr Phe Lys Ser
             65                  70                  75

Val Thr Arg Glu Asp Thr Gly Thr Tyr Thr Cys Met Val Ser Glu
             80                  85                  90

Glu Gly Gly Asn Ser Tyr Gly Glu Val Lys Val Lys Leu Ile Val
             95                 100                 105

Leu Val Pro Pro Ser Lys Pro Thr Val Asn Ile Pro Ser Ser Ala
            110                 115                 120

Thr Ile Gly Asn Arg Ala Val Leu Thr Cys Ser Glu Gln Asp Gly
            125                 130                 135

Ser Pro Pro Ser Glu Tyr Thr Trp Phe Lys Asp Gly Ile Val Met
            140                 145                 150

Pro Thr Asn Pro Lys Ser Thr Arg Ala Phe Ser Asn Ser Ser Tyr
            155                 160                 165

Val Leu Asn Pro Thr Thr Gly Glu Leu Val Phe Asp Pro Leu Ser
            170                 175                 180

Ala Ser Asp Thr Gly Glu Tyr Ser Cys Glu Ala Arg Asn Gly Tyr
            185                 190                 195

Gly Thr Pro Met Thr Ser Asn Ala Val Arg Met Glu Ala Val Glu
            200                 205                 210

Arg Asn Val Gly Val Ile Val Ala Ala Val Leu Val Thr Leu Ile
            215                 220                 225

Leu Leu Gly Ile Leu Val Phe Gly Ile Trp Phe Ala Tyr Ser Arg
            230                 235                 240

Gly His Phe Asp Arg Thr Lys Lys Gly Thr Ser Ser Lys Lys Val
            245                 250                 255

Ile Tyr Ser Gln Pro
            260
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<210> 24

<211> 270
<212> PRT
<213> Homo sapiens

<400> 24

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Val Arg Val Thr Val Asp Ala Ile Ser Val Glu Thr Pro Gln Asp
  1               5                  10                  15

Val Leu Arg Ala Ser Gln Gly Lys Ser Val Thr Leu Pro Cys Thr
             20                  25                  30

Tyr His Thr Ser Thr Ser Ser Arg Glu Gly Leu Ile Gln Trp Asp
             35                  40                  45

Lys Leu Leu Leu Thr His Thr Glu Arg Val Val Ile Trp Pro Phe
             50                  55                  60

Ser Asn Lys Asn Tyr Ile His Gly Glu Leu Tyr Lys Asn Arg Val
             65                  70                  75

Ser Ile Ser Asn Asn Ala Glu Gln Ser Asp Ala Ser Ile Thr Ile
             80                  85                  90

Asp Gln Leu Thr Met Ala Asp Asn Gly Thr Tyr Glu Cys Ser Val
             95                 100                 105

Ser Leu Met Ser Asp Leu Glu Gly Asn Thr Lys Ser Arg Val Arg
            110                 115                 120

Leu Leu Val Leu Val Pro Pro Ser Lys Pro Glu Cys Gly Ile Glu
            125                 130                 135

Gly Glu Thr Ile Ile Gly Asn Asn Ile Gln Leu Thr Cys Gln Ser
            140                 145                 150

Lys Glu Gly Ser Pro Thr Pro Gln Tyr Ser Trp Lys Arg Tyr Asn
            155                 160                 165

Ile Leu Asn Gln Glu Gln Pro Leu Ala Gln Pro Ala Ser Gly Gln
            170                 175                 180

Pro Val Ser Leu Lys Asn Ile Ser Thr Asp Thr Ser Gly Tyr Tyr
            185                 190                 195

Ile Cys Thr Ser Ser Asn Glu Glu Gly Thr Gln Phe Cys Asn Ile
            200                 205                 210

Thr Val Ala Val Arg Ser Pro Ser Met Asn Val Ala Leu Tyr Val
            215                 220                 225

Gly Ile Ala Val Gly Val Val Ala Ala Leu Ile Ile Ile Gly Ile
            230                 235                 240

Ile Ile Tyr Cys Cys Cys Cys Arg Gly Lys Asp Asp Asn Thr Glu
            245                 250                 255

Asp Lys Glu Asp Ala Arg Pro Asn Arg Glu Ala Tyr Glu Glu Pro
            260                 265                 270
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<210> 25
<211> 263
<212> PRT
<213> Homo sapiens

<400> 25
Leu Cys Ser Leu Ala Leu Gly Ser Val Thr Val His Ser Ser Glu
1 5 10 15

Pro Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu Ser Cys
20 25 30

Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe Asp
35 40 45

Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr
50 55 60

Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr
65 70 75

Phe Lys Ser Val Thr Arg Glu Asp Thr Gly Thr Tyr Thr Cys Met
80 85 90

Val Ser Glu Glu Gly Gly Asn Ser Tyr Gly Glu Val Lys Val Lys
95 100 105

Leu Ile Val Leu Val Pro Pro Ser Lys Pro Thr Val Asn Ile Pro
110 115 120

Ser Ser Ala Thr Ile Gly Asn Arg Ala Val Leu Thr Cys Ser Glu
125 130 135

Gln Asp Gly Ser Pro Pro Ser Glu Tyr Thr Trp Phe Lys Asp Gly
140 145 150

Ile Val Met Pro Thr Asn Pro Lys Ser Thr Arg Ala Phe Ser Asn
155 160 165

Ser Ser Tyr Val Leu Asn Pro Thr Thr Gly Glu Leu Val Phe Asp
170 175 180

Pro Leu Ser Ala Ser Asp Thr Gly Glu Tyr Ser Cys Glu Ala Arg
185 190 195

Asn Gly Tyr Gly Thr Pro Met Thr Ser Asn Ala Val Arg Met Glu
200 205 210

Ala Val Glu Arg Asn Val Gly Val Ile Val Ala Ala Val Leu Val
215 220 225

Thr Leu Ile Leu Leu Gly Ile Leu Val Phe Gly Ile Trp Phe Ala
230 235 240

Tyr Ser Arg Gly His Phe Asp Arg Thr Lys Lys Gly Thr Ser Ser
245 250 255

Lys Lys Val Ile Tyr Ser Gln Pro
260

<210> 26
<211> 273
<212> PRT
<213> Homo sapiens

<400> 26
Leu Cys Ala Val Arg Val Thr Val Asp Ala Ile Ser Val Glu Thr

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  1               5                  10                  15

Pro Gln Asp Val Leu Arg Ala Ser Gln Gly Lys Ser Val Thr Leu
            20                  25                  30

Pro Cys Thr Tyr His Thr Ser Thr Ser Ser Arg Glu Gly Leu Ile
            35                  40                  45

Gln Trp Asp Lys Leu Leu Leu Thr His Thr Glu Arg Val Val Ile
            50                  55                  60

Trp Pro Phe Ser Asn Lys Asn Tyr Ile His Gly Glu Leu Tyr Lys
            65                  70                  75

Asn Arg Val Ser Ile Ser Asn Asn Ala Glu Gln Ser Asp Ala Ser
            80                  85                  90

Ile Thr Ile Asp Gln Leu Thr Met Ala Asp Asn Gly Thr Tyr Glu
            95                  100                 105

Cys Ser Val Ser Leu Met Ser Asp Leu Glu Gly Asn Thr Lys Ser
           110                 115                 120

Arg Val Arg Leu Leu Val Leu Val Pro Pro Ser Lys Pro Glu Cys
           125                 130                 135

Gly Ile Glu Gly Glu Thr Ile Ile Gly Asn Asn Ile Gln Leu Thr
           140                 145                 150

Cys Gln Ser Lys Glu Gly Ser Pro Thr Pro Gln Tyr Ser Trp Lys
           155                 160                 165

Arg Tyr Asn Ile Leu Asn Gln Glu Gln Pro Leu Ala Gln Pro Ala
           170                 175                 180

Ser Gly Gln Pro Val Ser Leu Lys Asn Ile Ser Thr Asp Thr Ser
           185                 190                 195

Gly Tyr Tyr Ile Cys Thr Ser Ser Asn Glu Glu Gly Thr Gln Phe
           200                 205                 210

Cys Asn Ile Thr Val Ala Val Arg Ser Pro Ser Met Asn Val Ala
           215                 220                 225

Leu Tyr Val Gly Ile Ala Val Gly Val Val Ala Ala Leu Ile Ile
           230                 235                 240

Ile Gly Ile Ile Ile Tyr Cys Cys Cys Cys Arg Gly Lys Asp Asp
           245                 250                 255

Asn Thr Glu Asp Lys Glu Asp Ala Arg Pro Asn Arg Glu Ala Tyr
           260                 265                 270

Glu Glu Pro
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<210> 27
<211> 413
<212> DNA
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<220>
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catctgagca aggccaaaac ctggaagagg atacagtcac tctggaagta 100

ttagtggctc cagcagttcc atcatgtgaa gtaccctctt ctgctctgag 150

tggaactgtg gtagagctac gatgtcaaga caaagaaggg aatccagctc 200

ctgaatacac atggtttaag gatggcatcc gtttgctaga aaatcccaga 250

cttggctccc aaagcaccaa cagctcatac acaatgaata caaaaactgg 300

aactctgcaa tttaatactg tttccaaact ggacactgga gaatattcct 350

gtgaagcccg caattctgtt ggatatcgca ggtgtcctgg ggaaacgaat 400

gcaagtagat gat 413

<210> 28
<211> 22
<212> DNA
<213> artificial sequence

<220>
<223> sequence is synthesized

<400> 28
atcgttgtga agttagtgcc cc 22

<210> 29
<211> 23
<212> DNA
<213> artificial sequence

<220>
<223> sequence is synthesized

<400> 29
acctgcgata tccaacagaa ttg 23

<210> 30
<211> 48
<212> DNA
<213> artificial sequence

<220>
<223> sequence is synthesized

<400> 30
ggaagaggat acagtcactc tggaagtatt agtggctcca gcagttcc 48